On Page 33, amend the last paragraph as follows:

Figs. ~~26A, 26B and 26C~~ 26A and 26B, taken together, provide a table listing the primary Programmable Modes of Bar Code Reading Operation within the hand-supportable Digital Imaging-Based Bar Code Symbol Reading Device of the present invention, namely: Programmed Mode of System Operation No. 1--Manually-Triggered Single-Attempt 1D Single-Read Mode Employing the No-Finder Mode of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode Of System Operation No. 2--Manually-Triggered Multiple-Attempt 1D Single-Read Mode Employing the No-Finder Mode of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode Of System Operation No. 3--Manually-Triggered Single-Attempt 1D/2D Single-Read Mode Employing the No-Finder Mode And The Automatic Or Manual Modes of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 4--Manually-Triggered Multiple-Attempt 1D/2D Single-Read Mode Employing the No-Finder Mode And The Automatic Or Manual Modes of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 5--Manually-Triggered Multiple-Attempt 1D/2D Multiple-Read Mode Employing the No-Finder Mode And The Automatic Or Manual Modes of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 6--Automatically-Triggered Single-Attempt 1D Single-Read Mode Employing The No-Finder Mode Of the Multi-Mode Bar Code Reading Subsystem: Programmed Mode of System Operation No. 7--Automatically-Triggered Multi-Attempt 1D Single-Read Mode Employing The No-Finder Mode Of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 8--Automatically-Triggered Multi-Attempt 1D/2D Single-Read Mode Employing The No-Finder Mode and Manual and/or Automatic Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 9-- Automatically-Triggered Multi-Attempt 1D/2D Multiple-Read Mode Employing The No-Finder Mode and Manual and/or Automatic Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of System Operation No. 10--Automatically-Triggered Multiple-Attempt 1D/2D Single-Read Mode Employing The Manual, Automatic or Omniscan Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmed Mode of System Operation No. 11--Semi-Automatic-Triggered Single-Attempt 1D/2D Single-Read Mode Employing The No-Finder Mode And The Automatic Or Manual Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of System Operation No. 12--Semi-Automatic-

Triggered Multiple-Attempt 1D/2D Single-Read Mode Employing The No-Finder Mode And The Automatic Or Manual Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of Operation No. 13--Semi-Automatic-Triggered Multiple-Attempt 1D/2D Multiple-Read Mode Employing The No-Finder Mode And The Automatic Or Manual Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of Operation No. 14--Semi-Automatic-Triggered Multiple-Attempt 1D/2D Multiple-Read Mode Employing The No-Finder Mode And The Omniscan Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of Operation No. 15--Continously-Automatically-Triggered Multiple-Attempt 1D/2D Multiple-Read Mode Employing The Automatic, Manual Or Omniscan Modes Of the Multi-Mode Bar Code Reading Subsystem; Programmable Mode of System Operation No. 16--Diagnostic Mode Of Imaging-Based Bar Code Reader Operation:; and Programmable Mode of System Operation No. 17--Live Video Mode Of Imaging-Based Bar Code Reader Operation;

On Page 40, amend the last paragraph as follows:

The primary function of the System Mode Configuration Parameter Table 70 is to store (in non-volatile/persistent memory) a set of configuration parameters for each of the available Programmable Modes of System Operation specified in the Programmable Mode of Operation Table shown in Figs. 26A ~~through 26C~~ and 26B, and which can be read and used by the System Control Subsystem 19 as required during its complex operations.

On Page 60, amend the first paragraph as follows:

As shown in Fig. 7B, the System Control Subsystem 19 generates an Illumination Array Selection Control Signal which determines which LED illumination array (i.e. the narrow-area illumination array 27 or the far-field and narrow-field wide-area illumination arrays 28 or 29) will be selectively driven at any instant in time of system operation by LED Array Driver Circuitry 64 in the Automatic Light Exposure Measurement and Illumination Control Subsystem 15. As shown, electronic circuitry 57 processes the electrical signal from photo-detector 56 and generates an Auto-Exposure Control Signal for the selected LED illumination array. In term, this Auto-Exposure Control Signal is provided to the LED Array Driver Circuitry 64, along with an Illumination Array Selection Control Signal from the System Control Subsystem 19, for

selecting and driving (i.e. energizing) one or more LED illumination array(s) so as to generate visible illumination at a suitable intensity level and for suitable time duration so that the CMOS image sensing array 22 automatically detects digital high-resolution images of illuminated objects, with sufficient contrast and brightness, while achieving Global Exposure Control objectives of the present invention disclosed herein. As shown in ~~Fig. 7B and 7C~~ Figs. 7B through 7C2, the Illumination Array Selection Control Signal is generated by the System Control Subsystem 19 in response to (i) reading the System Mode Configuration Parameters from the System Mode Configuration Parameter Table 70, shown in Fig. 2A1, for the programmed mode of system operation at hand, and (ii) detecting the output from the automatic IR-based Object Presence and Range Detection Subsystem 12.

On Page 61, amend the first and second paragraphs as follows:

As shown in Fig. 7B, the narrow-band filtered optical signal that is produced by the parabolic light focusing mirror 55 is focused onto the photo-detector D1 56 which generates an analog electrical signal whose amplitude corresponds to the intensity of the detected optical signal. This analog electrical signal is supplied to the signal processing circuit 57 for various stages of processing. The first step of processing involves converting the analog electrical signal from a current-based signal to a voltage-based signal which is achieved by passing it through a constant-current source buffer circuit 58, realized by one half of transistor Q1 (58). This inverted voltage signal is then buffered by the second half of the transistor Q1 (58) and is supplied as a first input to a summing junction 59. As shown in ~~Fig. 7C~~ Figs. 7C1 and 7C2, the CMOS image sensing array 22 produces, as output, a digital Electronic Rolling Shutter (ERS) pulse signal 60, wherein the duration of this ERS pulse signal 60 is fixed to a maximum exposure time allowed in the system. The ERS pulse signal 60 is buffered through transistor Q2 61 and forms the other side of the summing junction 59. The outputs from transistors Q1 and Q2 form an input to the summing junction 59. A capacitor C5 is provided on the output of the summing junction 59 and provides a minimum integration time sufficient to reduce any voltage overshoot in the signal processing circuit 57. The output signal across the capacitor C5 is further processed by a comparator U1 62. In the illustrative embodiment, the comparator reference voltage signal is set to 1.7 volts. This reference voltage signal sets the minimum threshold level for the light exposure measurement circuit 57. The output signal from the comparator 62 is inverted by

inverter U3 63 to provide a positive logic pulse signal which is supplied, as Auto-Exposure Control Signal, to the input of the LED array driver circuit 64 shown in ~~Fig. 7C~~ Figs. 7C1 and 7C2.

As will be explained in greater detail below, the LED Array Driver Circuit 64 shown in Fig. 7C automatically drives an activated LED illuminated array, and the operation of LED Array Driver Circuit 64 depends on the mode of operation in which the Multi-Mode Illumination Subsystem 14 is configured. In turn, the mode of operation in which the Multi-Mode Illumination Subsystem 14 is configured at any moment in time will typically depend on (i) the state of operation of the Object Presence and Range Detection Subsystem 12 and (ii) the programmed mode of operation in which the entire Imaging-Based Bar Code Symbol Reading System is configured using System Mode Configuration Parameters read from the Table 70 shown in Fig. 2A1.

On Page 62, amend the first paragraph as follows:

As shown in ~~Fig. 7C~~ Figs. 7C1 and 7C2, the LED Array Driver Circuit 64 comprises analog and digital circuitry which receives two input signals: (i) the Auto-Exposure Control Signal from signal processing circuit 57; and (ii) the Illumination Array Selection Control Signal. The LED Array Driver Circuit 64 generates, as output, digital pulse-width modulated (PCM) drive signals provided to either the narrow-area illumination array 27, the upper and/or lower LED subarray employed in the near-field wide-area illumination array 28, and/or the upper and/or lower LED subarrays employed in the far-field wide-area illumination array 29. Depending on which Mode of System Operation the Imaging-Based Bar Code Symbol Reader has been configured, the LED Array Driver Circuit 64 will drive one or more of the above-described LED illumination arrays during object illumination and imaging operations. As will be described in greater detail below, when all rows of pixels in the CMOS image sensing array 22 are in a state of integration (and thus have a common integration time), such LED illumination array(s) are automatically driven by the LED Array Driver Circuit 64 at an intensity and for duration computed (in an analog manner) by the Automatic Light Exposure and Illumination Control Subsystem 15 so as to capture digital images having good contrast and

brightness, independent of the light intensity of the ambient environment and the relative motion of target object with respect to the Imaging-Based Bar Code Symbol Reader.